4.7 TRAFFIC AND TRANSPORTATION

4.7.1 Environmental Setting

The proposed Project area is primarily rural, with low-density residential and agricultural uses. The dominant mode of transportation in the area is the private automobile. The roadway network that would be directly affected by the proposed Project is located in southern Sacramento County and northern San Joaquin County. However, some roads in northern San Joaquin County would be indirectly affected by hauling of materials and supplies for construction of the proposed Project. Discussions of the roadway network, bicycle and pedestrian facilities, public transit, railroad, airports, and navigable channels in the proposed Project area are provided below.

Roadway Network

Regional and local access to the proposed Project site is provided by several State and County roadways, each of which would be used to transport construction materials, equipment, and workers to and throughout the proposed Project corridor. The pipeline would cross several local County and private roads and it would be laterally trenched within one road, Franklin Boulevard. The proposed Project corridor and surrounding roadway network are illustrated in the Project Description, Figures 2-1, 2-2, and 2.1-1 through 2.1-10. Descriptions of the regional and local roadways that would be affected by the proposed Project are provided below.

Regional Roadways

Regional access to the proposed Project area is provided by Interstate-5 (I-5) and State Route 99 (SR 99), both of which are under the jurisdiction of the California Department of Transportation (Caltrans). I-5 and SR 99 near the Project area are maintained by Caltrans District 3 in Sacramento County and District 11 in San Joaquin County. These regional roadways would provide access to the proposed Project sites; however, they would not be crossed or otherwise directly affected by construction of the proposed pipeline.

U.S. Interstate 5 (I-5) is a freeway that extends from San Diego, California at the Mexican border to Blaine, Washington at the Canadian border and passes through major cities along the west coast of the United States, including Los Angeles, Sacramento, Portland, and Seattle. I-5 has four lanes near the Project area and it runs parallel to the proposed alignment in a north-south trajectory, approximately 0.75 to 1.50 miles to the west. Annual Average Daily Traffic (ADT) along I-5 ranges from

57,000 trips north of Walnut Grove Road in San Joaquin County to 74,000 trips north of Elk Grove Boulevard in Sacramento County (Caltrans 2007).

State Route 99 (SR 99) is a State highway that extends from southern Kern County to Red Bluff in Tehama County. SR 99 parallels the Project alignment in a north-south orientation approximately 3.5 to 7.5 miles to the east. The portion of SR 99 near the proposed Project has four lanes with annual ADT levels that range from 63,000 trips north of Jahant Road in San Joaquin County to 98,000 trips north of Elk Grove Boulevard in Sacramento County (Caltrans 2007).

Local Roadways

The local roadways that would be crossed or longitudinally encroached by the proposed pipeline or would be used to access the proposed Project construction areas are described below. The majority of the local public roads in the Project area have low to moderate traffic volumes. They are all under the jurisdiction of Sacramento County. In addition to public roads, there are several private roads and driveways that would be affected by construction of the proposed Project. Below are summary descriptions of the roadways that would be affected by the proposed Project from south to north. Traffic volumes are provided below for the roads where data exists.

Desmond Road is a short two-lane east-west oriented roadway that connects Franklin Boulevard with Bruceville Road. The pipeline would be constructed across Desmond Road using a hammer bore.

Twin Cities Road (County Highway E13) is a two-lane arterial that extends east-west from Amador County to the Sacramento River and River Road. This road has an ADT level of approximately 5,200 trips east of River Road (SacDOT 2007). The pipeline would be constructed across this road with a hammer bore.

Franklin Boulevard (County Highway J8) is a two-lane arterial within the Project area that extends in a north-south trajectory from downtown Sacramento to northern San Joaquin County. Within the Project area, Franklin Boulevard has an ADT level of approximately 500 trips south of Desmond Road, and an ADT of approximately 1,900 trips south of Hood Franklin Road (SacDOT 2007). The pipeline would be constructed under Franklin Boulevard using a hammer bore at two locations and would be trenched within the roadway from Bilby Road to a location approximately 1,200 feet north of Bilby Road. The pipeline would also be trenched in the road to the north from the Union Pacific Railroad (UPRR) to a location approximately 1,500 feet north of the railroad. In

addition, the proposed 15-acre construction yard would be accessed from the east side of Franklin Boulevard, near the eastern terminus of Hood Franklin Road.

Dierson Road is a two-lane connector roadway in an east-west orientation that extends from Franklin Boulevard to past I-5. The proposed pipeline would be constructed across this roadway using an open trench.

Lambert Road is a two-lane rural connector that extends east-west from Clay Station Road to the Sacramento River/River Road, with an ADT level of approximately 1,200 trips west of Bruceville Road (SacDOT 2007). The proposed pipeline would be installed across this road with a horizontal directional drill.

Point Pleasant Road is a two-lane connector roadway. The proposed pipeline would be constructed across this roadway using an open trench.

Core Road is a two-lane east-west connecter roadway that extends from Franklin Boulevard to Ed Rau Road. The proposed pipeline would be constructed across this road in an open trench.

Hood Franklin Road is a two-lane thoroughfare, extending east-west from SR 99 on- and off-ramps to the Sacramento River/River Road. Hood Franklin Road has an ADT level of approximately 5,500 vehicles west of Franklin Boulevard (SacDOT 2007). This road may be used to provide access to the proposed pipeline construction sites.

Bilby Road is a two-lane roadway that extends from Franklin Road to near Bruceville Road. The pipeline would be installed within the south side of this road using an open trench from Franklin Road to a location approximately 800 feet east of Franklin Road.

Elk Grove Boulevard is a four-lane thoroughfare that provides access from I-5 to the City of Elk Grove. The Elk Grove Station and the proposed temporary pullback construction area for the pipeline would be accessed from a dirt road off the south side of Elk Grove Boulevard, approximately 1,000 feet west of the UPRR.

Bicycle and Pedestrian Transportation

Bicycle facilities include bike paths, bike lanes, and bike routes. Bike paths are paved trails that are separated from the roadways. Bike lanes are lanes on roadways that are designated for use by bicycles by striping, pavement legends, and/or signs. Bike routes typically are roadways that are designated for bicycle use with signs, but do not have

additional width for bicycle lanes. There are no designated bicycle facilities that would be crossed by the proposed Project (Sacramento County 1993).

Pedestrian facilities include sidewalks, crosswalks, and pedestrian signals. There are no designated pedestrian facilities that would be affected by construction activities within the vicinity of the proposed Project.

Public Transit

The Sacramento Regional Transit District offers bus and light rail transit service in Sacramento County; however, none of the bus or light rail routes are in the proposed Project area (SRTD 2007).

Railroad

The UPRR parallels the proposed pipeline alignment for the majority of the route. With the exception of the proposed use of part of the UPRR right-of-way (ROW) for a temporary pullback construction area north of Elk Grove Boulevard, the UPRR would not be directly affected by the proposed Project.

Airports

Franklin Field, a public use airport owned and operated by Sacramento County, is located approximately one-half mile east of the proposed pipeline alignment.

Navigable Channels

The proposed pipeline would be constructed under the Mokelumne and Cosumnes Rivers using a horizontal directional drill. The existing pipeline bridge that crosses the Cosumnes River would be removed, possibly affecting access along that stretch of the river. Cosumnes River is not a navigable channel for commercial shipping facilities (Sacramento County 1993).

4.7.2 Regulatory Setting

The development and regulation of the proposed Project area transportation network primarily involves State and local jurisdictions. All public roads within the proposed Project area are under the jurisdiction of Caltrans, the Sacramento County Department of Transportation, or the San Joaquin County Public Works/Solid Waste Department. It should be noted that no construction work would take place on San Joaquin County

roads; however, San Joaquin County roads may be used for hauling purposes. Caltrans jurisdiction includes permitting and regulation of the use of State roads, while county jurisdiction includes implementation of State permitting, policies, and regulations, as well as management and regulation of the county roads. Proposed Project construction work that would occur within a public roadway would require encroachment permits prior to commencing work in the public ROW.

The Sacramento County Department of Transportation Right-of-Way Management (ROWM) section is responsible for managing construction and other activities within the County road right-of-way including utility work. The ROWM section reviews and approves requests for road closures for construction projects.

California Department of Transportation

Caltrans manages interregional transportation, including management of construction activities within or above the California highway system. In addition, Caltrans is responsible for permitting and regulating the use of State roadways. The proposed Project area includes two roadways that fall under Caltrans' jurisdiction (i.e., I-5 and SR 99). Caltrans requires that permits be obtained for transportation of oversized loads, transportation of certain materials, and for construction-related traffic disturbances. Caltrans regulations would apply to the transportation of oversized loads on State roadways (e.g., I-5 and SR 99) associated with the construction of the proposed Project.

Local Plans and Policies

As identified above, several of the roads that parallel or would be crossed by the proposed Project are under the jurisdiction of Sacramento County. County policies and regulations regarding the design or use of roadways are detailed in the Circulation Element of the Sacramento County General Plan. However, because the plan focuses on the design and implementation of circulation system improvements, policies in this element do not directly relate to the proposed Project.

4.7.3 Significance Criteria

A traffic or transportation impact from Project construction or operation is considered significant and would require mitigation if:

- Project related traffic or other activities would result in a substantial long-term increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections;

- Project related traffic or other activities would result in a substantial safety hazard to motorists, bicyclists, or pedestrians;
- Project related traffic or other activities would restrict one or more travel lanes of a primary or secondary arterial during peak-hour traffic with no suitable detour available, thereby reducing the roadway's capacity and creating congestion;
- After Project construction activities are complete, the Project results in a noticeable deterioration of public or private roadway and/or driveway surfaces;
- Vehicular or bicycle access to or from residential land uses would be continuously disrupted for more than 48 hours;
- Project related traffic or other activities would prevent movement of emergency vehicles; or
- Project implementation would result in insufficient parking capacity for existing adjacent uses.

4.7.4 Impact Analysis and Mitigation

Applicant Proposed Measures

Applicant Proposed Measures (APMs) have been identified by PG&E in its Environmental Analysis prepared for the CSLC. APMs that are relevant to this section are presented below. This impact analysis assumes that all APMs would be implemented as defined below. Additional mitigation measures are recommended in this section if it is determined that APMs do not fully mitigate the impacts for which they are presented.

APM TRA-1. Traffic Control Plan. The Project contractor, in coordination with SACDOT, the San Joaquin County Traffic Engineering Division, the City of Elk Grove, the California Highway Patrol, and local emergency services, shall develop and implement a traffic control plan for Project construction to reduce the effects of construction on the roadway system throughout the construction period. Proposed lane closures during the AM and PM commuting hours shall be minimized. Lane closures shall be limited to the immediate vicinity of the open trench. Pedestrian and bicyclists access shall be re-routed around the Project area at all times. During construction, the construction sites shall be secured to prevent pedestrian and bicyclists from entering the work sites.

APM TRA-2. Reduce Potential for Roadway Damage. In order to reduce potential roadway damage impacts, the Project contractor shall implement the following measures:

- Videotape the roadway and access roads prior to and following construction to document the existing and restored roadways;
- Make temporary repairs from roadway damage as necessary during Project construction;
- Repair any damaged roadway to its original condition immediately after construction has been completed;
- Coordinate with SACDOT to determine appropriate routes for truck travel before beginning construction; and
- Coordinate with SACDOT regarding planned improvements near the facility to limit interference with the implementation of roadway improvements or trenching in nearly completed facilities before beginning construction.

Project Construction Worker and Truck Traffic

Project-related traffic would involve the transportation of workers, equipment, and pipe to the construction sites during the four-month construction period. Pipeline construction work would typically be scheduled from 6:00 a.m. to 7:00 p.m., which would result in most of the workers commuting to and from the sites in off-peak hours.

It is estimated that approximately 75 workers would be required on a daily basis to construct the proposed Project. Assuming a trip generation rate of 1.5 trips per day per worker, the 75 workers would generate 113 auto round trips (226 round trips) traveling to and from the work sites each day. This level of traffic would remain fairly constant throughout the construction period, and would also typically occur at early morning and early evening hours. Project construction workers would park personal vehicles in the Franklin Construction Yard and carpool to the construction sites in company vehicles.

The pipe would be transported from the supplier either by train or barge transports to a shipyard in Stockton. If shipped by train, the pipe would be stored where it is unloaded from the railcars, either in a location near Lodi or in Thornton. The pipe would be delivered to the Franklin construction yard for staging, or directly to the construction

sites. It is estimated that approximately 120 truck roundtrips would be required to deliver the pipe to the project site over a two- to three-week period. Daily pipe deliveries would not be expected to exceed 10 roundtrips per day. PG&E's trucking contractor would obtain all necessary "oversized load" permits as required by Caltrans, Sacramento County, San Joaquin County, and Elk Grove, which would specify the transport routes.

Equipment, materials, and construction workers would be transported to the Franklin construction yard via I-5 and SR 99. Access to and from the Franklin construction yard and the proposed pipeline route would primarily occur via Franklin Boulevard, Elk Grove Boulevard, Hood Franklin Road, Twin Cities Road, Thornton Road, and other county and private roads.

The movement of construction equipment and materials from the construction yard to the Project site would result in short-term impacts on the transportation network, but would not create a substantial increase in traffic or exceed established level of service standards. Traffic congestion impacts related to Project construction worker and haul truck trips would be less than significant (Class III).

Roadway Damage

Roadway trench techniques would be used to install the proposed pipeline within approximately 800 feet in Bilby Road from just west of the UPRR to Franklin Boulevard. Approximately 3,600 feet of trenching and horizontal directional drill activities would occur within Franklin Boulevard north of Bilby Road to the intersection of Franklin Boulevard and the UPRR. Three Sacramento County roads (Dierson, Point Pleasant, and Core), private access roads, and private driveways would be perpendicularly crossed by pipeline trenching activities. Therefore, construction would result in intermittent and temporary damage to roadway surfaces. Pursuant to APM TRA-2 (see above), the Project contractor would be required to repair affected roadways to pre-construction conditions. Therefore, potential impacts related to roadway damage would be less than significant (Class III).

Parking

Parking for Project workers, inspectors, and equipment would be adequately accommodated within the construction yard and the 75-foot construction right-of-way. Project construction workers would park personal vehicles in the construction yard and carpool to the construction sites in company vehicles staged at the yard. Parking would

only be necessary for construction workers during pipeline construction, which would take four months to complete. The proposed Project would not result in a land use that would create a demand for parking through the development of retail, residential, recreational, or public use facilities; therefore, impacts are considered less than significant (Class III).

Impact TRA-1: Work within Public Roadways would Disrupt Traffic Flow.

Traffic flow would be disrupted at locations were the pipeline would be trenched within public roads. (Potentially Significant, Class II)

Roadway trench techniques would be used to install the proposed pipeline within approximately 800 feet in Bilby Road. Approximately 3,600 feet of trenching and horizontal directional drill activities would occur within Franklin Boulevard. In addition, three Sacramento County roads (Dierson, Point Pleasant, and Core) would be crossed by pipeline trenching activities.

Encroachment permits would need to be secured from Sacramento County prior to conducting work within a county road ROW. Trenching within these roads would require either temporary lane closures or temporary closures of the roads, which would disrupt the flow of traffic along these roads. Pursuant to APM TRA-1 (see above), the Project contractor would be required to prepare and implement a traffic control plan to reduce the effects of roadway construction on the local traffic. However, to strengthen the effectiveness of APM TRA-1, Mitigation Measure MM TRA-1 is recommended, which provides more detail regarding implementation requirements. Implementation of MM TRA-1 would be required in order to reduce potentially significant impacts to less than significant levels.

Mitigation for Impact TRA-1**:**

MM TRA-1. **Traffic Control Plans.** Sixty days prior to construction, for each road encroachment where trenching or other work within roadways is proposed, PG&E shall submit a Traffic Control Plan to the Sacramento County Public Works Department, and/or other appropriate traffic regulatory agency, and the California State Lands Commission (CSLC) for review and approval. Traffic Control Plans would be required for construction activities that would directly or indirectly disturb the local traffic flow at each roadway encroachment location.

Verification that the plans have been submitted to and approved by the Sacramento County Public Works Department and/or other appropriate traffic regulatory agency shall be provided to the CSLC prior to the commencement of construction activities. The traffic control plans would contain elements on detour routing, flagging, and measures to ensure emergency access through the construction area and to adjacent properties.

Rationale for Mitigation

The preparation and implementation of Traffic Control Plans is necessary to help alleviate traffic congestion and maintain access along the roads that would be disturbed by trenching and drilling. Planned traffic flow at these locations would prevent significant traffic congestion impacts. Impacts would be less than significant with implementation of Mitigation Measure MM TRA-1 (Class II).

Impact TRA-2: Work within Private Roadways and Driveways would Disrupt Residential Access.

Residential Access would be disrupted at locations were the pipeline would be trenched within private roadways and driveways. (Potentially Significant, Class II)

Access to several residences along the proposed pipeline route would be temporarily blocked during construction, particularly along Bilby Road and Franklin Boulevard. Private roads and driveways would be temporarily blocked by trenching and horizontal directional drilling activities. However, in its Environmental Analysis submitted to the CSLC, PG&E stated that access to all driveways would be generally maintained with any disruption not lasting more than four hours (PG&E 2006). To formalize this commitment and provide more detail, MM TRA-2 would be required.

Mitigation for Impact TRA-2:

MM TRA-2. Private Property Access. Access to all private roadways and driveways shall not be disrupted for more than four hours at a time. PG&E shall notify property owners of the roadways and driveways proposed to be blocked by construction activities at least two weeks prior to the access disruption.

Rationale for Mitigation

Formalizing PG&E's intent to limit disruption to private property access to no more than four hours would ensure implementation during construction activities. Impacts would be less than significant with implementation of MM TRA-2 (Class II).

Impact TRA-3: Construction Activities could Disrupt Emergency Access.

Emergency service provider access through the construction areas and adjacent properties could be disrupted during construction activities. (Potentially Significant, Class II)

Project area roads currently provide adequate emergency access within the Project area to serve agricultural operations as well as rural residential uses. Following completion of the Project, the operation and maintenance of the pipeline would not adversely impact access routes within the Project area and would not involve the construction or realignment of additional public access roads. However, the construction of the Project would require the temporary closure of individual lanes and roads, which would increase traffic delays and could adversely affect emergency vehicle response times in the area. This would be considered a potentially significant impact (Class II).

Mitigation for Impact TRA-3**:**

As discussed under Impact TRA-1, above, Mitigation Measure TRA-1 would require PG&E to prepare detailed Traffic Control Plans, which would include an element with measures to ensure emergency access through the construction area and to adjacent properties. Implementation of this mitigation measure would reduce temporary impacts to emergency access to less than significant (Class II).

Rationale for Mitigation

The preparation and implementation of Traffic Control Plans would reduce temporary impacts associated with emergency access to less than significant (Class II) by requiring the implementation of approved emergency access plans.

Impact and Mitigation Summary

Table 4.7-1 presents a summary of impacts on traffic and transportation and recommended mitigation measures.

Table 4.7-1. Summary of Traffic and Transportation Impacts and Mitigation Measures

Impacts	Mitigation Measures
TRA-1: Work within Public Roadways would Disrupt Traffic Flow.	**MM TRA-1.** Traffic Control Plans
TRA-2: Work within Private Roadways and Driveways would Disrupt Residential Access.	**MM TRA-2.** Private Party Access
TRA-3: Construction Activities could Disrupt Emergency Access	**MM TRA-1.** Traffic Control Plans

4.7.5 Impacts of Alternatives

No Project Alternative

The No Project Alternative would not result in the near-term construction of a natural gas pipeline between the Thornton and Elk Grove Stations. The short-term traffic impacts described above that would occur under the proposed Project would not occur under the No Project Alternative.

Franklin 1 Alternative

The Franklin 1 Alternative would result in an open trench crossing of Bilby Road, compared to an 800-foot open trench parallel installation within the south side of Bilby Road as would be required under the proposed Project. It would result in less open trench construction activities within Franklin Boulevard compared to the proposed Project. This alternative would also avoid the private road and driveway crossing impacts (Impact TRA-2) along Bilby Road and Franklin Boulevard that would occur under the proposed Project. Although the Franklin 1 Alternative would result in less open trench construction activities within Bilby Road and Franklin Boulevard compared to the proposed Project, it would still require some work within these roadways. With the exception of Impact TRA-2, the Franklin 1 Alternative would result in the same potentially significant impacts (Class II) described for the proposed Project.

Franklin 2 Alternative

From a traffic and transportation perspective, the Franklin 2 Alternative would result in the same impacts that would occur under the Franklin 1 Alternative. Therefore, with the

exception of Impact TRA-2, the Franklin 2 Alternative would result in the same potentially significant impacts (Class II) described for the proposed Project.

Project without Bridge Replacement Alternative

The Project without Bridge Replacement Alternative would not alter any portion of the proposed Project pipeline alignment or the construction methods. As a result, the impacts to traffic under the Project without Bridge Replacement Alternative would be the same as described above for the proposed Project (Class II).

4.7.6 Cumulative Projects Impact Analysis

In addition to the proposed Project, other projects may contribute to cumulative impacts on traffic and transportation in the vicinity of the proposed Project. The identified cumulative projects potentially contributing to cumulative impacts are discussed in Section 3.4, Cumulative Related Future Projects.

All proposed Project impacts on traffic and transportation would result from temporary construction activities. When projects in the same vicinity are constructed at the same time, or are timed closely together, they can result in a cumulative impact on traffic and transportation systems in the local area. As discussed in Section 3.4, Cumulative Related Future Projects, several projects including a large housing development project are planned in the vicinity of the proposed Project route. Additionally, road maintenance activities for other projects and for local and State roads could occur in the vicinity of the proposed Project. The timing of construction for the cumulative projects is unknown, and it is possible that portions of these projects could be constructed at the same time and in the same vicinity as the proposed Project.

Cumulative projects that would include work within a public roadway would require an encroachment permit from the applicable traffic control agency, which would include traffic control permit stipulations. Any cumulative impacts on traffic and transportation would be limited to temporary disruptions, such as slower traffic or detours, and would be less than significant (Class II).